

ASSIGNMENT 4

Textbook Assignment: "Technical Drawing," pages 4-1 through 4-68.

- 4-1. When you render technical drawings, what are your basic requirements?
1. Speed, accuracy, vagueness, and deficiency
 2. Accuracy, technique, speed, and neatness
 3. Neatness, technique, correct tools, and alertness
 4. The most technically advanced tools, clean working space, and privacy
- 4-2. When technical sketching, what type of (a) pencil and (b) eraser should you use?
1. (a) HB (b) artgum
 2. (a) 2H (b) pink pearl
 3. (a) H (b) pink pearl
 4. (a) 6H (b) artgum
- 4-3. Since technical sketches are not made to any scale, what method should you use to determine proportion?
1. Cross-sectioned paper
 2. Proportional dividers
 3. Mathematical calculation
 4. Visual estimation using a dowel or pencil
- 4-4. Which of the following flaws causes technical sketches to appear poorly drawn?
1. Lack of scale
 2. Poor lettering
 3. Poor proportioning
 4. Apparent erasures
- 4-5. When you are rendering technical sketches, what proportions should you initially establish?
1. Height to width
 2. Length to width
 3. 2:3
 4. 3:4
- 4-6. When sketching, now should you make vertical lines?
1. From left to right
 2. From the bottom up
 3. From the top downward
 4. By turning the paper and sketching from left to right
- 4-7. When beginning to sketch, what technique will help you develop proficiency sketching straight lines?
1. Using a straightedge
 2. Placing dots and connecting them
 3. Lightly drawing a line with a ruler and skyblue pencil
 4. Using a triangle
- 4-8. How should you sketch circles and arcs?
1. Using short clockwise strokes
 2. Using long clockwise strokes
 3. Using long counterclockwise strokes
 4. Using short counterclockwise strokes

- 4-9. When sketching arcs with tangential lines, what do you use to locate the ends of the arcs?
1. Small cross hairs
 2. The diameters of the arcs
 3. Short vertical lines
 4. The straight lines tangent to the arcs
- 4-10. When freehand sketching small ellipses, you should hold the pencil naturally and above the paper. What should be your next step?
1. Sketch out an ellipse on the paper
 2. Move the pencil rapidly in an elliptical path
 3. Move the pencil rapidly in a circular path
 4. Place dots on the paper in an approximately elliptical pattern
- 4-11. What technique should you use to transfer an image without using carbon or saral paper?
1. Place tracing paper over the image then flip the paper over and press down
 2. Use a hard lead pencil and trace the image using extra pressure to indent the bottom sheet
 3. Color the reverse side of the image in a contrasting color and trace
 4. Color the image then trace
- 4-12. In architectural constructions, what is the strongest form of structural support?
1. A tee
 2. An I beam
 3. A channel
 4. A WF beam
- 4-13. Given an angle support with a dimension of L 6 x 3 x 1/2, what part of the dimension represents the width of the leg?
1. 6
 2. 1/2
 3. 3
 4. L
- 4-14. How many pounds per foot does a bearing pile with the given dimension of HP 14 x 73 weigh?
1. 14
 2. 26
 3. 73
 4. 52
- 4-15. What is the term given to the amount of weight the earth is able to support?
1. Total dead load
 2. Soil-bearing capacity
 3. Total live load
 4. Equilibrium capacity
- 4-16. Sill plates placed on a foundation of concrete are themselves the foundation for what other structural member?
1. Headers
 2. Sole plates
 3. Stud caps
 4. Studs
- 4-17. Cantilevered construction is the type of construction technique normally applied to what type of structure?
1. An overhanging porch
 2. A doorframe
 3. A window casement
 4. A girder

- 4-18. On trusses, what term indicates the horizontal distance between the peak and the heel?
1. Gusset
 2. Slope distance
 3. Rise
 4. Half span
- 4-19. How should you show a spot weld on a weld symbol?
1. Place a square above the base
 2. Place a small circle on the base
 3. Place a small circle above the reference line
 4. Place a square under the reference line
- 4-20. You should indicate temporary supports for complicated structures on what type of drawings?
1. Erection drawings
 2. Fabrication drawings
 3. Layout drawings
 4. Falsework drawings
- 4-21. To find the length, thickness, and character of building walls, you should look at what type of drawing?
1. Elevation plan
 2. Framing plan
 3. Floor plan
 4. Plan view
- 4-22. A list of written specifications and definition of terms are part of what drawing?
1. Specification drawings
 2. Detail drawings
 3. Fabrication drawings
 4. Falsework drawings
- 4-23. Shipboard isometric wiring diagrams found in DC Central provide what type of information to the repair and fire parties during drills and emergencies?
1. Circuit functions
 2. Equipment component connections
 3. Equipment, panels, connection boxes, and cable run locations
 4. Signal or current flow between major equipment components
- 4-24. What designation refers to a shipboard main electrical switchboard or switch gear group location?
1. 1SF
 2. 2S
 3. 2E
 4. 2SF
- 4-25. A cable tag marked (4-168-1)-4P-A(1) indicates that the cable serves to power what function?
1. Propulsion power
 2. Ship's service power
 3. Ship's service lighting
 4. Control power
- 4-26. In a shipboard isometric wiring diagram, what is the degree of angularity for drawing athwartship lines?
1. 30
 2. 45
 3. 60
 4. 90
- 4-27. You should draw interdeck cabling at what angle to the centerline of the ship?
1. 30
 2. 45
 3. 60
 4. 90

- 4-28. How large should you draw a shipboard wiring deck plan representing 200 linear feet of deck?
1. 12 inches
 2. 35 inches
 3. 24 inches
 4. 50 inches
- 4-29. What aircraft wire identification number refers to wiring that controls the landing gear?
1. 2RL85G20N
 2. 2RG85F20N
 3. 2GL85F20N
 4. 2LR85F20G
- 4-30. What is the major functional difference between electronic prints and electrical prints?
1. Electrical prints are more detailed and complex
 2. Electronic prints are more detailed and complex
 3. Electrical prints are color coded
 4. Electronic prints are color coded
- 4-31. Electromechanical drawings are a combination of what two types of drawings?
1. Electronic and architectural
 2. Electrical and electronic
 3. Structural and electrical
 4. Mechanical and electrical
- 4-32. Logic diagrams describe the binary functions of digital computers.
1. True
 2. False
- 4-33. Sockets, pin numbers, and test points are part of what type of diagram?
1. Block diagram
 2. Basic logic diagram
 3. Detailed logic diagram
 4. Location diagram
- 4-34. For troubleshooting electrical malfunctions in digitized devices, what type of drawing should you prepare?
1. Detailed logic diagrams
 2. Basic logic diagrams
 3. Block diagrams
 4. Location diagrams
- 4-35. What publication sets industry-wide standards for all machine drawings?
1. MIL-STD 100A
 2. MIL-STD 9A
 3. ANSI 46.1
 4. ANSI Y14.5M-1982
- 4-36. What method should you use to show acceptable variations in size and surface dimensions?
1. Fractionalizing
 2. Fragmenting
 3. Tolerancing
 4. Proportioning
- 4-37. Which of the following indications of tolerance is bilateral?
1. 5.00, $\pm .002$
 2. 5.00, 4.098/5.002
 3. 5.00, 5.002
 4. 5.00, 4.098, 5.002

- 4-38. What feature control symbol should you use to indicate angularity?
1. \angle
 2. $\sqrt{}$
 3. \leq
 4. \perp
- 4-39. When accuracy is critical, what method should you use to draw screw threads?
1. Simplified
 2. Schematic
 3. Detailed
 4. Minimal representation
- 4-40. How many threads per inch are on a bolt with an external thread designation of 1/4-35 UNC-2?
1. 15
 2. 25
 3. 35
 4. 70
- 4-41. Which bolt has a left-handed fine thread?
1. 1/4-35-NF-LH-2
 2. 1/4-LHNC-35-2
 3. 2-3501/4-NF
 4. 1/4-35-NCLH-2
- 4-42. What is the term for the surface of a thread that corresponds to the major diameter of an internal thread and minor diameter of an external thread?
1. Crest
 2. Root
 3. Depth
 4. Pitch
- 4-43. How should you determine the pitch of a thread?
1. Multiply the measurement of the lead by the length of the external threads
 2. Measure the thread depth and multiply by the threads per inch
 3. Multiply threads per inch by length of external threads
 4. Measure parallel to the axis a point on one thread to a corresponding point on the next thread
- 4-44. On a machine drawing with a circular pitch of 14 and a root diameter of 12, how many gear teeth should you draw?
1. 922
 2. 644
 3. Only enough to identify dimensions
 4. Only enough to interface with adjacent gears
- 4-45. What term refers to the diameter of the addendum circle?
1. Dedendum
 2. Addendum
 3. Choral pitch
 4. Outside diameter
- 4-46. How should you mathematically calculate the number of teeth on a gear?
1. Multiply the diametrical pitch by the diameter of the pitch circle
 2. Multiply the addendum circle by the radii
 3. Multiply the circular pitch by the diametral pitch
 4. Multiply the root diameter by the outside diameter and divide by 360

- 4-47. The distance from the top of one gear tooth to its bottom, including any clearance is known by what term?
1. Working depth
 2. Whole depth
 3. Thickness
 4. Rack teeth
- 4-48. What symbol provide a foundation for surface finish information?
1. $\sqrt{\quad}$
 2. \perp
 3. \cup
 4. \wedge
- 4-49. At what degree to the horizontal should you draw the legs of a finish mark?
1. 30
 2. 90
 3. 45
 4. 60
- 4-50. When should you draw an isometric single-line plumbing diagram?
1. When details are essential
 2. When speed is essential and pipes are bent in more than one plane
 3. When the print will be used to install pipes
 4. When visual appearance is important
- 4-51. How should you show a permanent pipe connection?
1. With a crosshair and a note
 2. With a small vertical line
 3. With a heavy solid dot
 4. With an open-faced square
- 4-52. On piping fittings such as crosses and elbows, what opening is read first?
1. The smallest opening
 2. The largest opening
 3. The opposing opening
 4. The outlet end
- 4-53. On a typical 45° Y-bend with the dimensions of 45cm x 30cm x 60cm, what is the measurement of the outlet end?
1. 35cm
 2. 30cm
 3. 60cm
 4. 75cm
- 4-54. A brown valve in your space on board ship indicates that the valve connects piping carrying what type of fluids?
1. Anesthetics
 2. Flammable
 3. Oxidizing
 4. Toxic and poisonous
- 4-55. What additional hazard marking label should appear on piping with a brown valve?
1. FLAM
 2. TOXIC
 3. PHDAN
 4. AAHM
- 4-56. Shipboard hydraulic lines carrying excess fluids overboard are known by what term?
1. Return lines
 2. Operating lines
 3. Vent lines
 4. Supply lines